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(54) Title: **PHARMACEUTICAL PREPARATION AND METHOD OF TREATMENT OF HUMAN MALIGNANCIES WITH ARGININE DEPRIVATION**

(57) Abstract: The present invention provides an isolated and substantially purified recombinant human arginase having sufficiently high enzymatic activity and stability to maintain Adequate Arginine Depletion in a patient. The present invention also provides a pharmaceutical composition comprising the modified invention enzyme and method for treatment of diseases using the pharmaceutical composition.